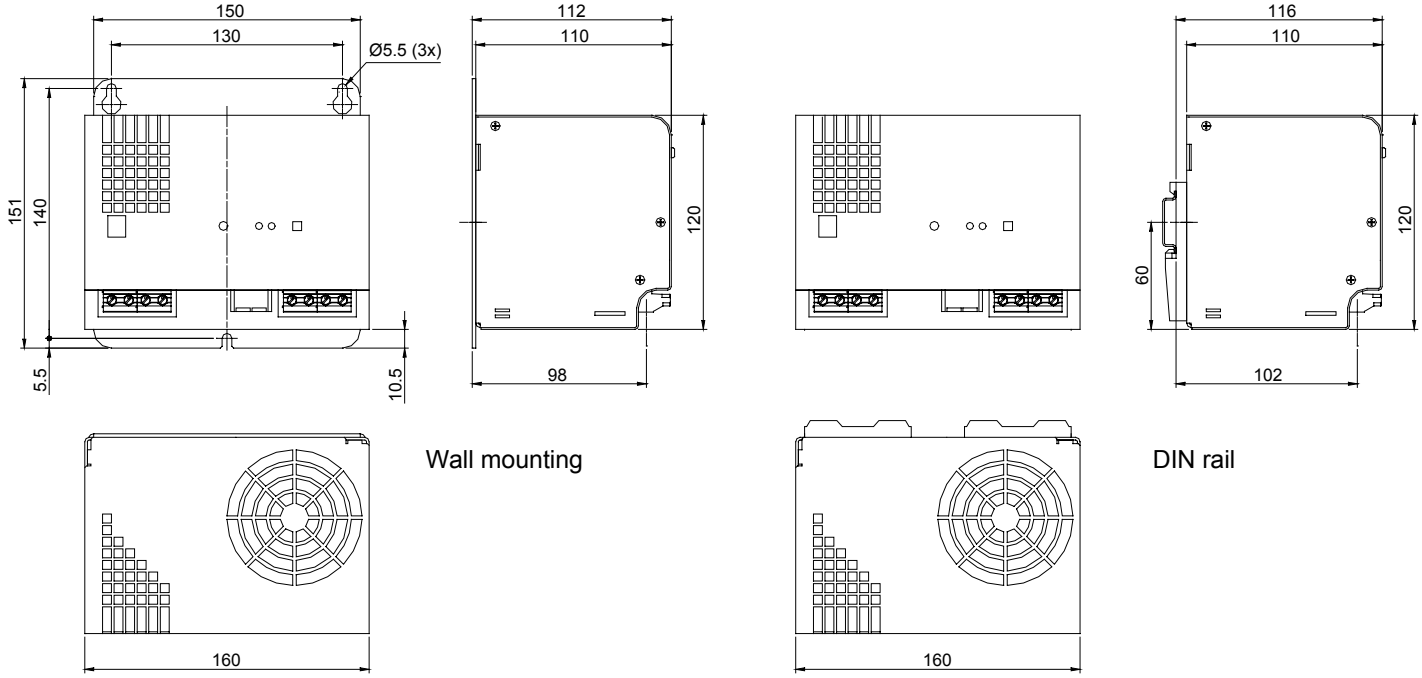
AC-DC POWER SUPPLY
PRIMARY SWITCHED MODE
SINGLE OUTPUT
PH 520 SERIES

- **Input: 120 / 230 VAC switchable (DC 263 – 350V)**
- **Internal fuse**
- **Overtemperature protection**
- **Output adjustable ***
- **Parallel connection with load sharing ***
- **Power boost with high start-up current 140% Inenn ***
- **Control signals ***
- **Can be operated in any assembly position**

*** additional features, not included in PH 520-2420A model**



ORDER DATA			*Order numbers in italics*	
Vo **V**	**Io** **A**	Preset range Vo **V**	Type No. **DIN-rail**	Type No. **Wall mounting**
24	**0 - 20**	**-**	**PH520-2420A** *14.6040.120*	**PH520-2420A** *14.6040.125*
24	**0 - 20**	**22,5 – 31,5 ***	**PH520-2420** *14.6040.100*	**PH520-2420** *14.6040.105*
48	**0 - 10**	**42,5 – 54**	**PH520-4810** *14.6040.300*	**PH520-4810** *14.6040.305*

* max. output 540 watts

Further output voltages upon request.
Redundancy version (PH520-...R) upon request.

Please ensure a distance of approx. 30mm between both the air-inlet openings at the front of the housing and the air-outlet openings at the top of the device and surrounding components or surfaces.

Also make sure that outgoing air is not sucked back into the device during installation.

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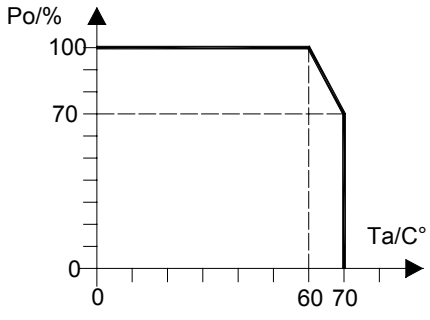
INPUT	
Input voltage range	AC 187 – 264V, 50/60 Hz mechanical switchover to AC 90-134V DC 263 – 350V (on 230V) requiring external DC fuse
Efficiency	89%
Input current limitation**	≤ 35 Apeak typ. in cold state ≤ 70 Apeak typ. in hot state
Internal fuse	16ATH / 250V
OUTPUT	
Preset range Vo *	22.5 – 31.5V / 42.5 – 54V
Tolerance of Vo $_{nominal}$	+- 0,1V (PH520-2420A 24V –0% / +4%)
Max. output	540W
Operation indicator **	Green LED for Vo, red LED for error
Ripple	80 mVss typ.
Noise voltage	120 mVss typ.
Temperature coefficient	0.025% / K
Switch on/switch off	No Vo overshoot (soft-start)
Start-up delay	< 1 s
Rise time	15 ms typ., 350 ms at 100.000 µF load
PROTECTION AND CONTROLLING	
Overvoltage protection	33/58 V automatic repeat
Current limitation	105 – 120% Inominal, output permanent short-circuit proof, boost time 1.5 s 140%Inominal **
Overtemperature protection	Switches off if overheated, reconnection with hysteresis
Mains buffering	10 ms typ.
Power-Good-Signal* ("DC OK")	Relais contact (<60V/0.2A), changing at Vo 18-20V / 35-40V from OK to FAIL
Remote on/off *	External switch-off with >3-24V / 4-60V or switch from Vo
SAFETY	
	EN 60950 / VDE 0805 / VDE 113 Safety Class I, VDE 0100, IP 20 Sparking distance in air and leakage distance according to VDE 0160/pr / EN 50178 UL 508 listed / UL 1950 / CSA 22.2-950

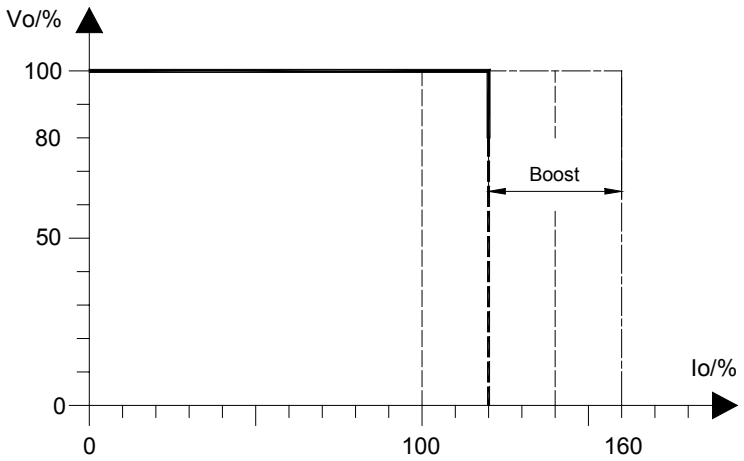
EMC		
Mains feedback (PFC)	EN 61000-3-2	Class A
Flicker	EN 61000-3-3	
Interference suppression/	EN 61000-6-2	
Interference immunity	EN 61000-4-2	Intensity 4
	EN 61000-4-3	Noise level 10V/m
	EN 61000-4-4	Intensity 4
	EN 61000-4-5	Intensity 4
	EN 61000-4-6	Noise level 10V/m
	EN61000-4-11	
	ENV 50204	Noise level 10V/m
Interference emission	EN 50081-1	
	EN 55011 / EN 55022 Class B	
	Radiation depends on assembly	
OPERATING DATA		
Temperature range	-25°C to 70°C, integral temperature-controlled fan, air intake at front	
Derating	3% / K at +60°C (see diagram)	
Weight	1.6 kg	
MECHANICS		
Connection	Mains input: 3-pole, 0.6 - 0.7 Nm 0.75-4/6 mm² strand/wire Load output: 4-pole, 0.6 - 0.7 Nm 0.75-4/6 mm² strand/wire Control signals**: 4-pole, 0.79 Nm 0.15 – 2.5 mm (with plug connector)	
Assembly	All systems can be snapped onto a symmetrical 35mm DIN-rail according to EN 50022 with a diameter of 1 to 2.5 mm or wall-mounted with mounting plates.	
EXPLANATORY NOTES		
PE ⏚	Protective conductor **Do not use supply without PE-connection!**	
+ /-	Load connections	
Relais/OK/Fail *	Monitoring connections	
Remote on/off*	Control connections	
Switching from single * to parallel operation mode	Use switch at the front of housing	

* Additional features, not included in PH520-2420A model
** Values are different for PH520-2420A

safety information www.mgv.de **Please refer to the MGV user instructions before use. (also in internet: www.mgv.de)**



Derating



Current limiting characteristic

Start-up takes place with short-circuit current between 140% and 160% of the nominal current for a period of approx. 0.4 s. Start-up frequency is approx. 0.3 Hz. The average short-circuit current is about 125% $I_{nominal}$